

CLAIMS:

1. A conductive composition comprising:

an organic polymer;

a nanosized conductive filler and/or carbon fibers having an average diameter of greater than or equal to about 1000 nanometers; and

graphite.
2. The composition of Claim 1, wherein the organic polymer is a thermoplastic polymer or a thermosetting polymer.
3. The composition of Claim 2, wherein the thermoplastic polymer is a polyacetal, polyacrylic, polycarbonate, polystyrene, polyester, polyamide, polyamideimide, polyarylate, polyarylsulfone, polyethersulfone, polyphenylene sulfide, polyvinyl chloride, polysulfone, polyimide, polyetherimide, polytetrafluoroethylene, polyetherketone, polyether etherketone, polyether ketone ketone, polybenzoxazole, polyoxadiazole, polybenzothiazinophenothiazine, polybenzothiazole, polypyrazinoquinoxaline, polypyromellitimide, polyquinoxaline, polybenzimidazole, polyoxindole, polyoxoisindoline, polydioxoisindoline, polytriazine, polypyridazine, polypiperazine, polypyridine, polypiperidine, polytriazole, polypyrazole, polypyrrolidine, polycarborane, polyoxabicyclononane, polydibenzofuran, polyphthalide, polyacetal, polyanhydride, polyvinyl ether, polyvinyl thioether, polyvinyl alcohol, polyvinyl ketone, polyvinyl halide, polyvinyl nitrile, polyvinyl ester, polysulfonate, polysulfide, polythioester, polysulfone, polysulfonamide, polyurea, polyphosphazene, polysilazane, or a combination comprising at least one of the foregoing organic polymers.
4. The composition of Claim 2, wherein the thermosetting resins are polyurethane, natural rubber, synthetic rubber, epoxy, phenolic, polyesters, polyamides, silicones, or a combination comprising at least one of the foregoing thermosetting resins.

5. The composition of Claim 1, wherein the organic polymer is a blend of a thermoset polymer and a blend of a thermoplastic polymer.
6. The composition of Claim 1, wherein the graphite is naturally occurring graphite, wherein the naturally occurring graphite is flake graphite, amorphous graphite or crystal vein graphite having an aspect ratio of greater than or equal to about 2.
7. The composition of Claim 1, wherein the graphite generally has average particle sizes of about 1 to about 5,000 micrometers.
8. The composition of Claim 1, wherein the conductive composition comprises graphite in an amount of about 40 to about 90 wt%, based on the total weight of the composition.
9. The composition of Claim 1, wherein the nanosized conductive fillers have at least one dimension less than or equal to about 1000 nanometers.
10. The composition of Claim 1, wherein the nanosized conductive fillers are in the form of powder, drawn wires, strands, fibers, tubes, nanotubes, rods, whiskers, flakes, laminates, platelets, ellipsoids, discs, spheroids, fractals or combinations comprising at least one of the foregoing forms.
11. The composition of Claim 1, wherein the nanosized conductive fillers are single wall carbon nanotubes, multiwall carbon nanotubes, vapor grown carbon fibers, carbon black, conductive metal particles, conductive metal oxides, metal coated fillers, or a combination comprising at least one of the foregoing nanosized conductive fillers.
12. The composition of Claim 11, wherein the carbon black is used in amounts of about 0.001 to about 80 wt% of the total weight of the conductive composition.

13. The composition of Claim 11, wherein the carbon black is used in amounts of about 0.25 to about 5 wt% of the total weight of the conductive composition.

14. The composition of Claim 1, wherein the carbon fibers are obtained from pitch or polyacrylonitrile and have an aspect ratio of greater than or equal to about 5.

15. The composition of Claim 1, wherein the ratio of the nanosized conductive filler and/or the carbon fibers to the graphite is about 1:6 to about 1:80.

16. The composition of Claim 1, wherein the viscosity of the electrically conductive composition is about 100 to about 600 Pascal-seconds at 1500 sec^{-1} .

17. A method for manufacturing a composition comprising:

blending an organic polymer; a nanosized conductive filler and/or carbon fibers having a diameter of greater than or equal to about 1000 nanometers; and graphite, wherein the composition has an electrical volume resistivity less than or equal to about $10e^8 \text{ ohm-cm}$.

18. The method of Claim 17, wherein the blending comprises melt blending, solution blending or combinations comprising at least one of the foregoing methods of blending.

19. The method of Claim 17, wherein the blending involves the use of shear force, extensional force, compressive force, ultrasonic energy, electromagnetic energy, thermal energy or combinations comprising at least one of the foregoing forces and energies and is conducted in processing equipment wherein the aforementioned forces are exerted by a single screw, multiple screws, intermeshing co-rotating or counter rotating screws, non-intermeshing co-rotating or counter rotating screws, reciprocating screws, screws with pins, barrels with pins, screen packs, rolls, rams, helical rotors, or combinations comprising at least one of the foregoing.

20. The method of Claim 17, wherein the blending comprises extrusion.
21. The method of Claim 17, wherein the blending comprises melt blending or solution blending, and wherein the blending utilizes a fluid in the liquid state, the gaseous state, the supercritical state or combinations comprising at least one of the foregoing states.
22. The method of Claim 17, wherein specific energy utilized for the blending is an amount of about 0.01 kwhr/kg to about 10 kwhr/kg.
23. The method of Claim 17, further comprising injection molding the composition.
24. An article manufactured from the composition of Claim 1.
25. An article manufactured by the method of Claim 17.